

[Keys to Fig. 1]

DVA	data processing unit
E	input unit
EM	input medium
DRB	data back reference
DB	data bank
AM	output medium
TM	daily reports
TLE	partial performance unit(s)
AF	output format
VP	pre-protocol
KL	control lists

24

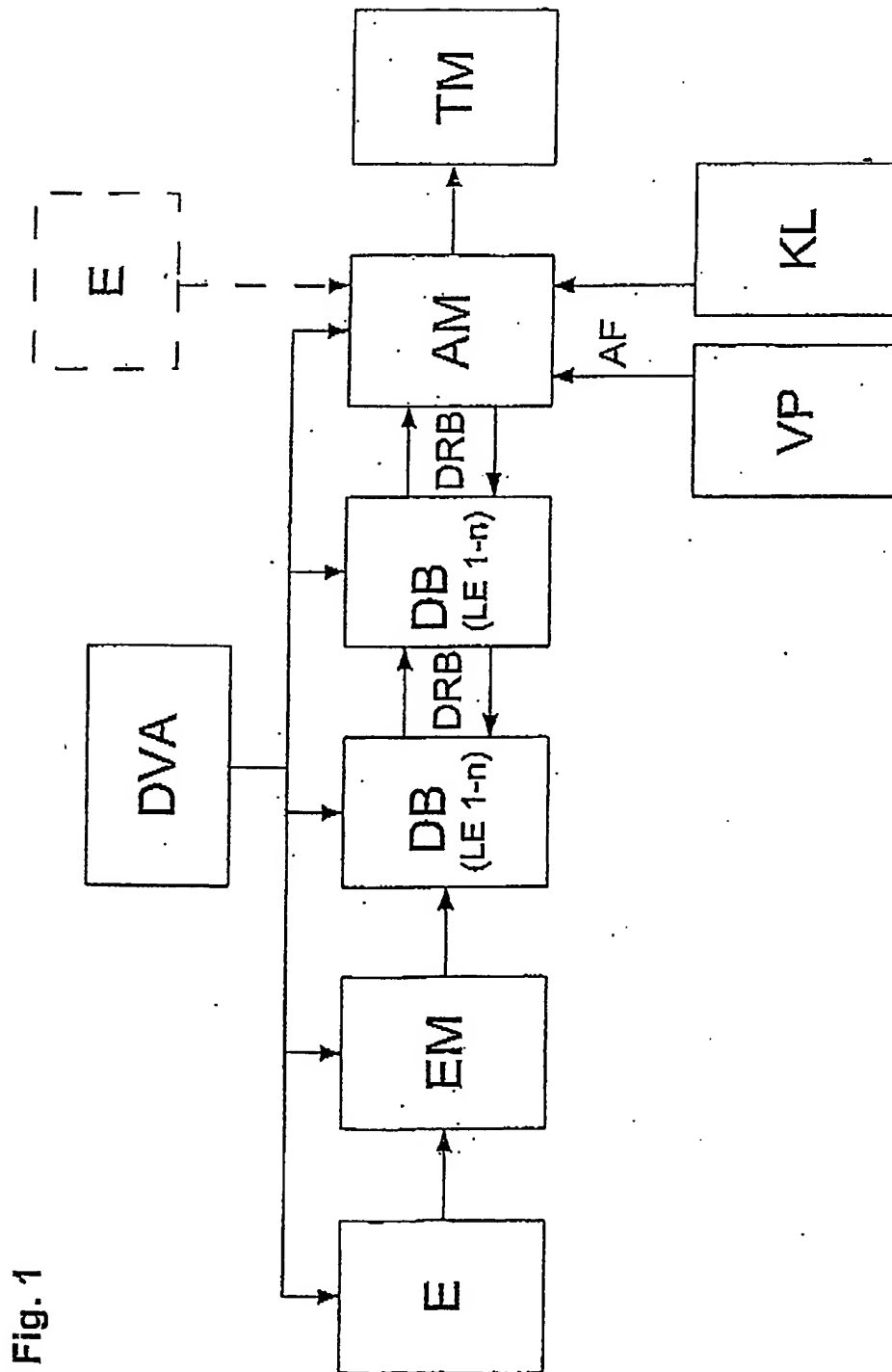


Fig. 1

[Keys to Fig. 2]

LV     performance items

(A)    LV items

(B)    LE performance units (all project-relevant operations, hierarchically grouped

(C)    complete coordination of all LV items with single or multiple performance  
units with amount/quantity; not every LE assigned one or some LV items

(D)    arrangement with grouping and detailing on the hierarchically  
(superordinate and subordinate groups) ordered LEs

(E)    works

(F)    costs

(G)    deadlines

(H)    locations

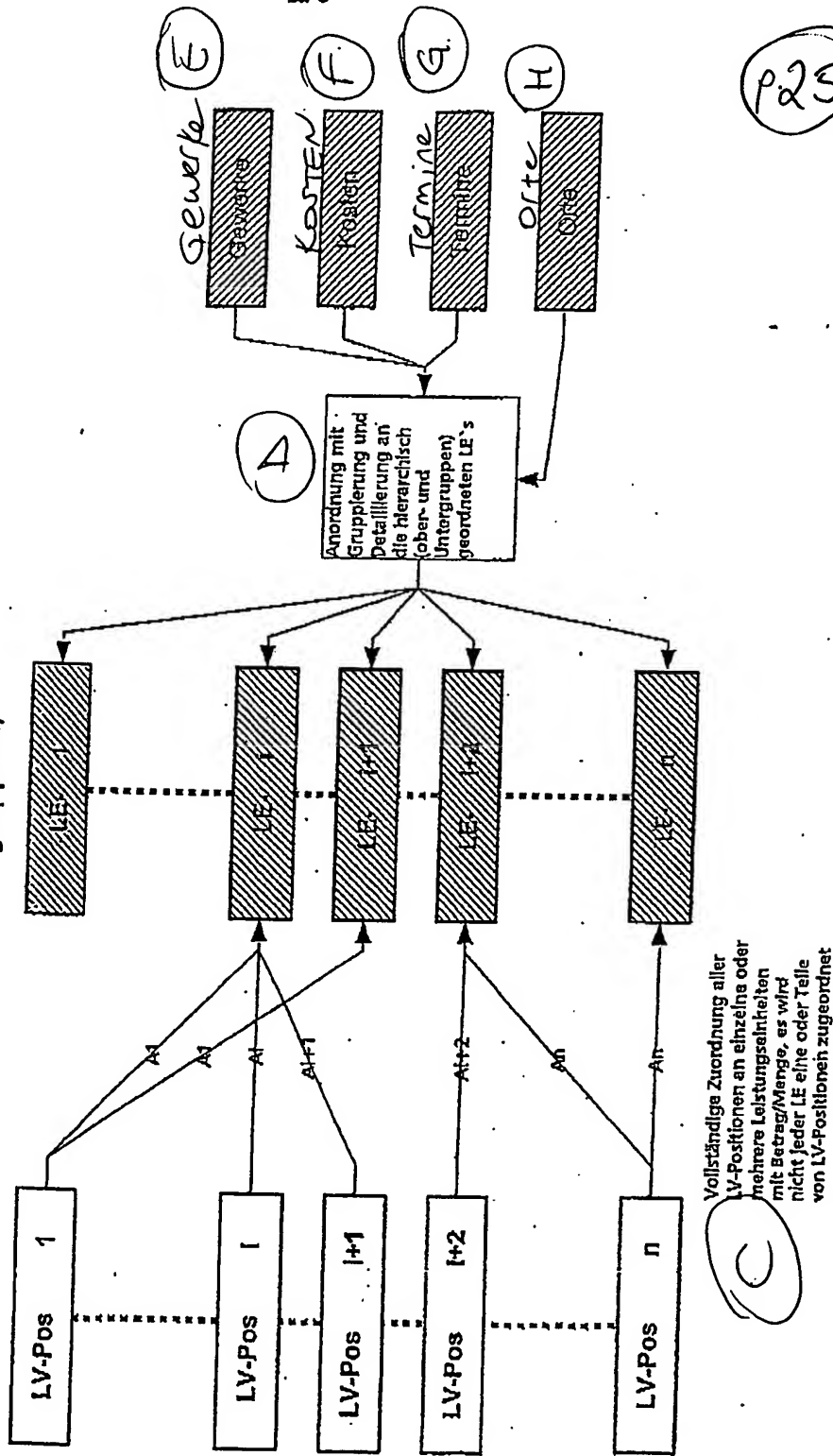
2/8

P25

(B) LE-Leistungseinheiten  
(alle projektrelevanten  
Vorgänge, hierarchisch  
gruppiert)

LV-Positionen

Fig. 2



[Keys to Fig. 3]

- A past technology
- B preliminary work
- C possible preparation
- D production
- E application
- F object
- G pre-planning
- H execution planning
- I preparation of object production
- J object production
- K rough mass determination, cost estimating
- L detailed mass determination, costing
- M LV allocation
- N contracts
- O LE employment in:
  - protocols
  - daily reports
  - calculations
  - control lists
  - etc.
- P new technology
- Q locating structure
- R LE 1 performance units 1 on the estimating level
- S LE 2 performance units 2 on the costing level
- T LE 3 performance units 3 on the allocation/contracts level
- U LE 4 performance units 4 on the level of project execution/object production
- V supplementation by operational performance units

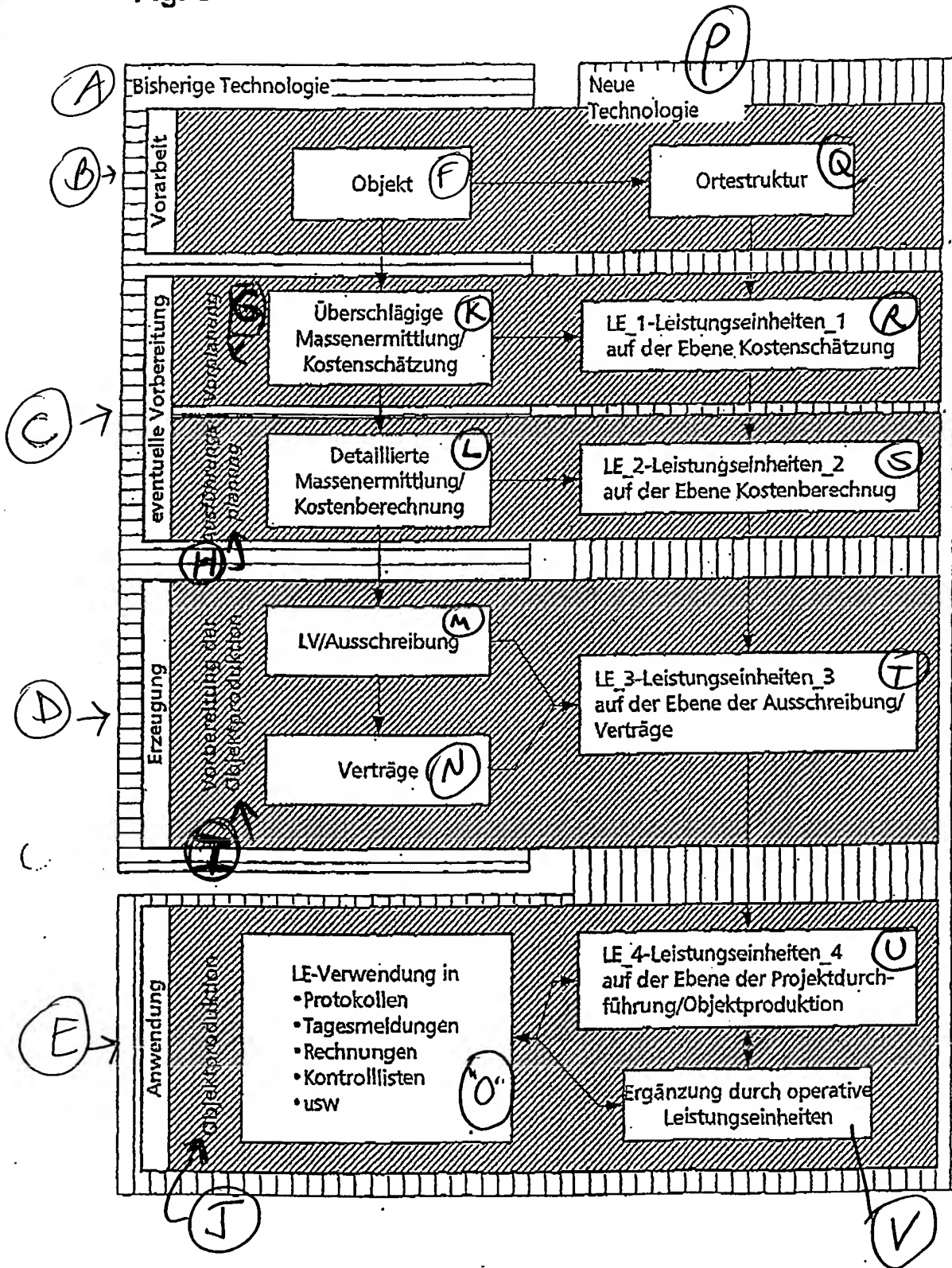
WO 2004/015599

PCT/DE2003/002531

Fig. 3

3/8

p.26



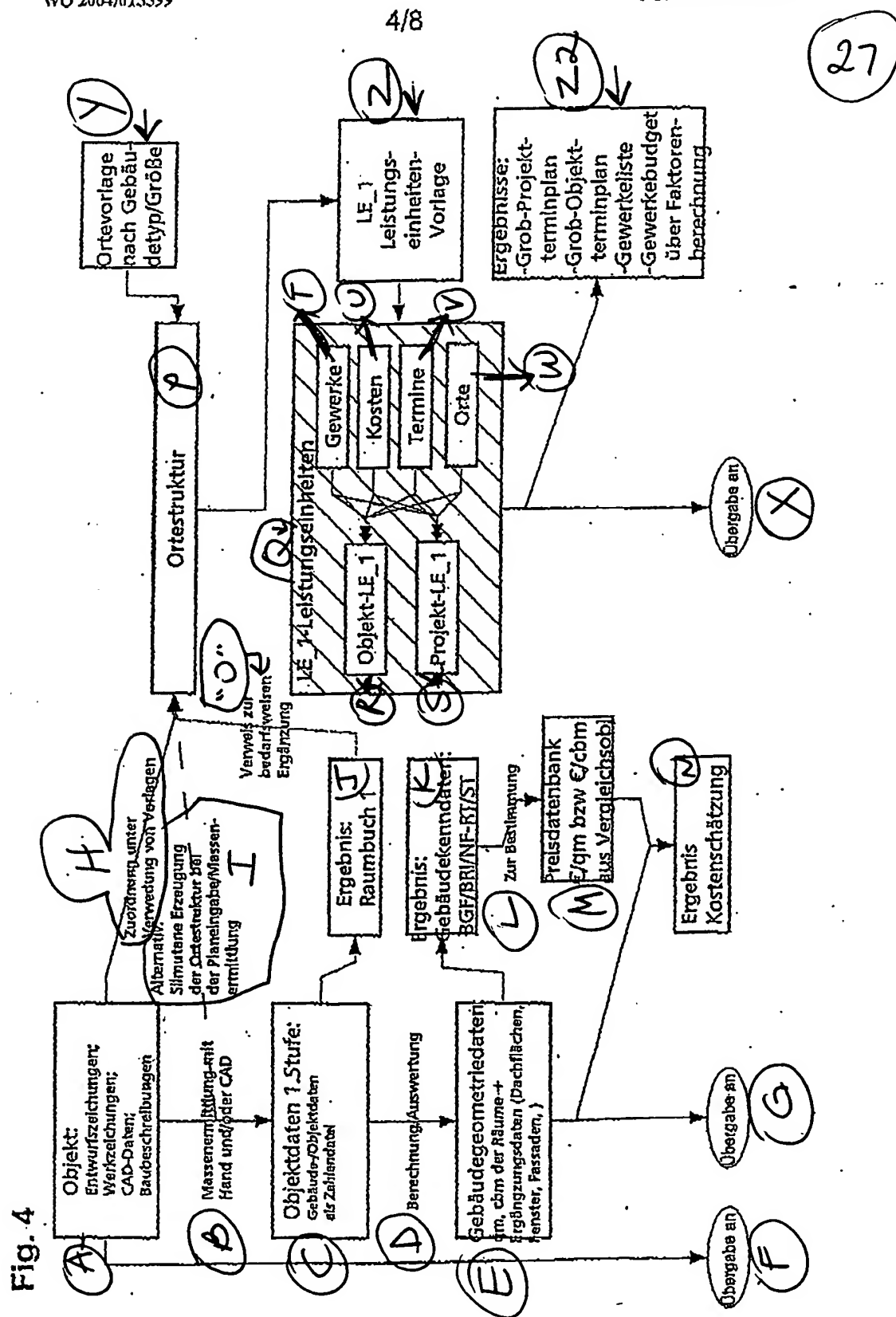
[Keys to Fig. 4]

- A     object: design drawings  
                                 working drawings  
                                 CAD data  
                                 construction descriptions
- B     mass determination by hand and/or CAD
- C     object data 1st stage  
         building/object data as numerical file
- D     calculation/evaluation
- E     building geometry data:     square meters, cubic meters of space  
   + supplementary data (roof areas, windows,  
   façades)
- F, G   transfer to
- H     assignment using patterns
- I     alternatively: simultaneous production of local structure with plan input/  
         mass determination
- J     result: space book 1
- K     result: key building data: BGF/BRI/NF-RT/ST
- L     for determination
- M     price data bank, €/sq.m., €/cu.m. (from comparable structures)
- N     result: cost estimating
- O     reference to supplementation at need
- P     locating structure
- Q     LE 1 performance units
- R     object LE 1
- S     project LE 1
- T     works
- U     costs
- V     deadlines
- W     places
- X     transfer to
- Y     place patterns by building type/size
- Z     LE 1 performance units pattern
- Z2   results:     coarse project deadline program  
                         coarse object deadline program  
                         works list  
                         works budget or factor calculation

WO 2004/015599

PCT/DE2003/002531

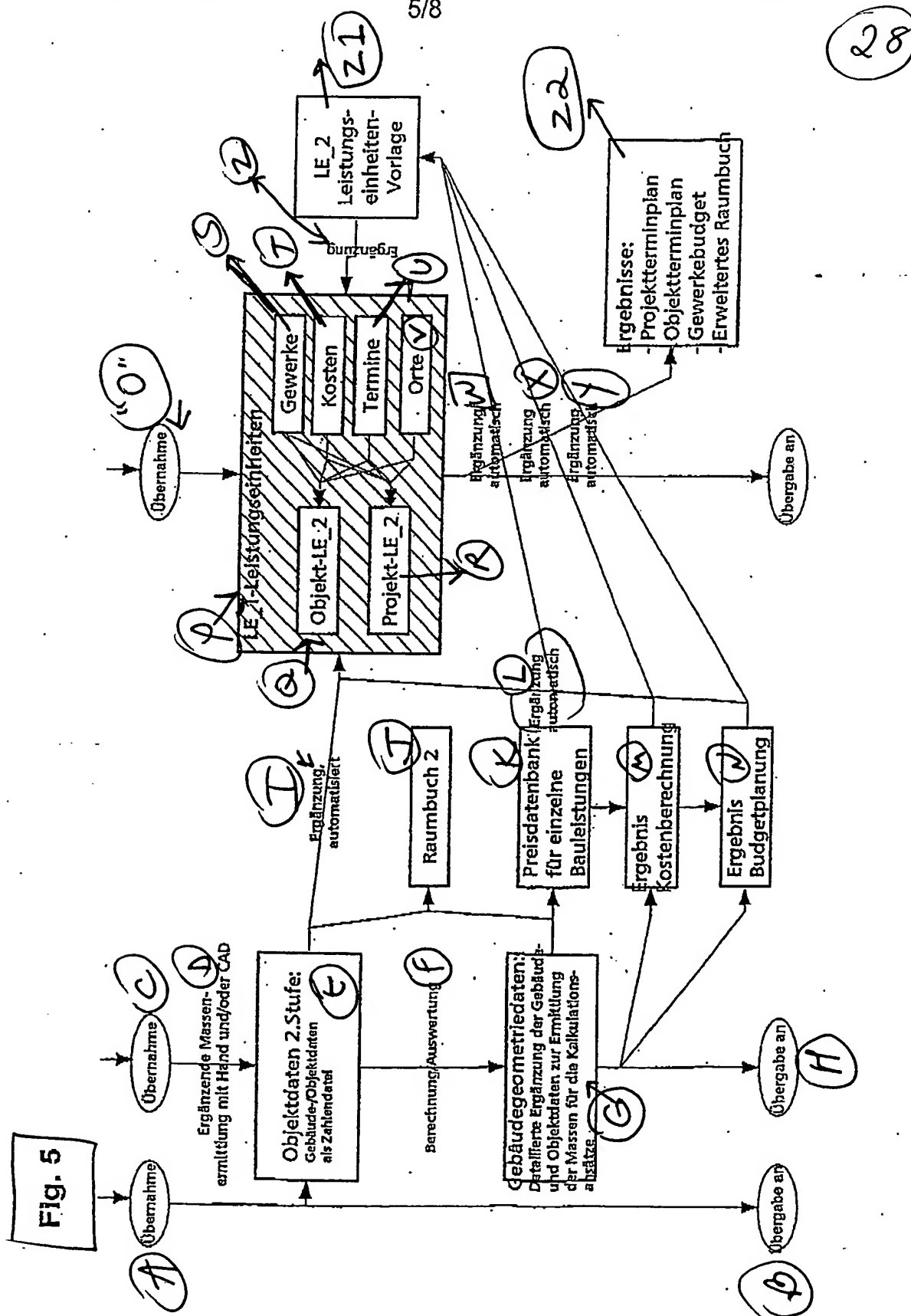
4/8





[Keys to Fig. 5]

- A transfer from
- B transfer to
- C transfer to
- D supplementary mass determination, manually and/or CAD
- E object data 2nd stage: building/object data as numerical file
- F calculation/evaluation
- G geometrical building data: detailed augmentation of building and object data  
to determine measurements for estimating
- H transfer to
- I supplementation, automated
- J space book 2
- K price data bank for individual construction performances
- L automatic supplementation
- M result, cost accounting
- N result, budget planning
- O transfer from
- P LE 1 performance units
- Q object LE 2
- R project LE 2
- S works
- T costs
- U deadlines
- V locations
- W, X, Y automatic supplementation
- Z augmentation
- Z1 LE 2 performance units pattern
- Z2 results:
  - project deadline program
  - object deadline program
  - works budget
  - expanded space book



[Keys to Fig. 6]

- A transfer from
- B data supplementation for determination of performance items and masses
- C performance indexes:
  - preliminary remarks, other contractual conditions, estimating measures
- D performance indexes with prices
- E contract additions
- F works contracts:
  - building/object data
  - as numerical file
- G transfer from
- H mass determination, manual and/or CAD
- I LV patterns
- J working in LE 3 on detail additions
- K, L, M automated equalization
- N manual input, manual equalization
- O results:
  - detailed project deadline program
  - detailed object deadline program
  - detailed trades budget
  - expanded space book
- P transfer from
- Q LE 3 performance units
- R object LE 3
- S project LE 3
- T works
- U costs
- V deadlines
- W places
- X LE 3 performance units
- Y transfer to
- Z1 object LE 3
- Z2 project LE 3
- Z3 manual method
- Z4 location structure
- Z5 LE 2 performance units pattern
- Z6 works
- Z7 costs
- Z8 deadlines
- Z9 places

WO 2004/015599

PCT/DE2003/002531

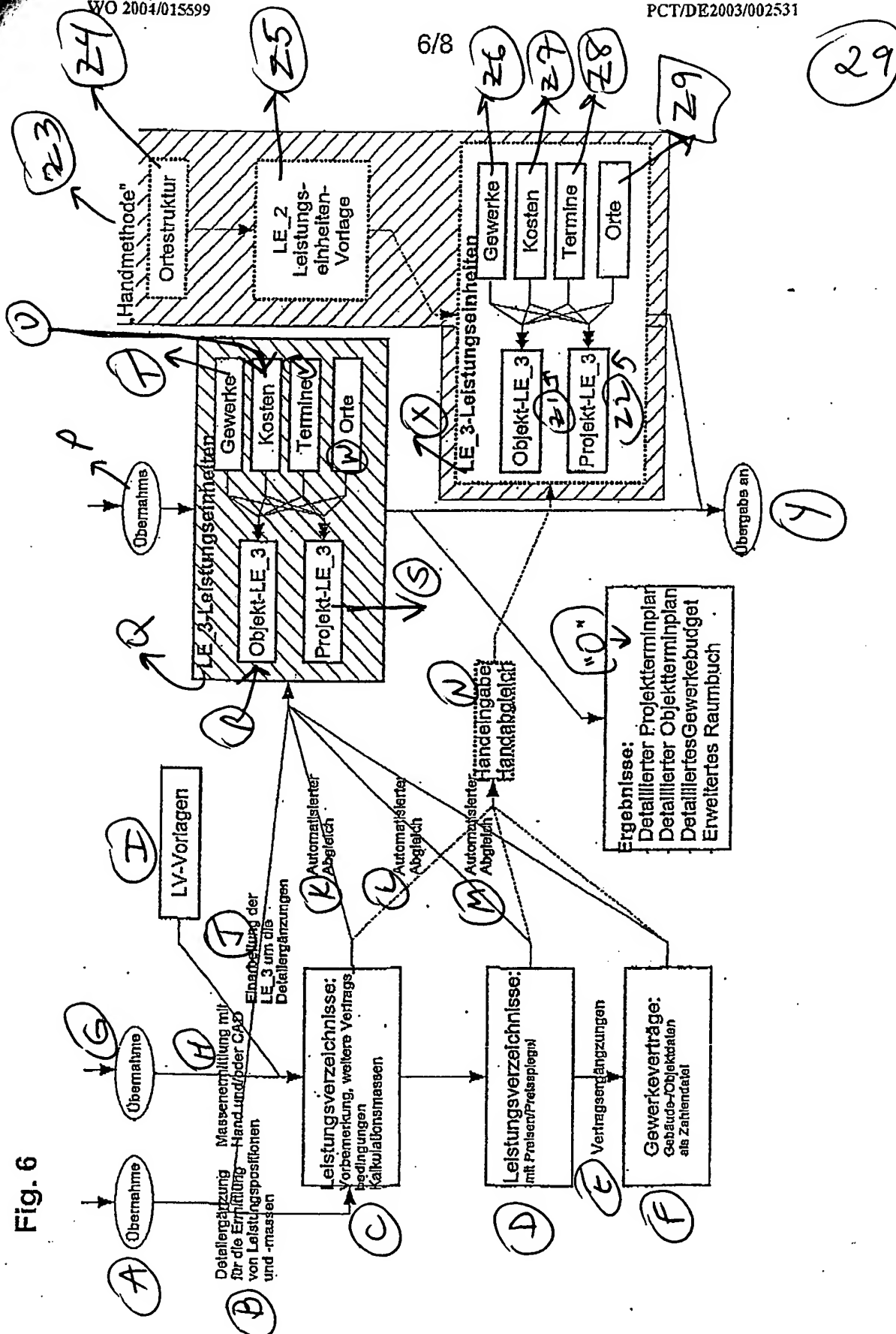


Fig. 6

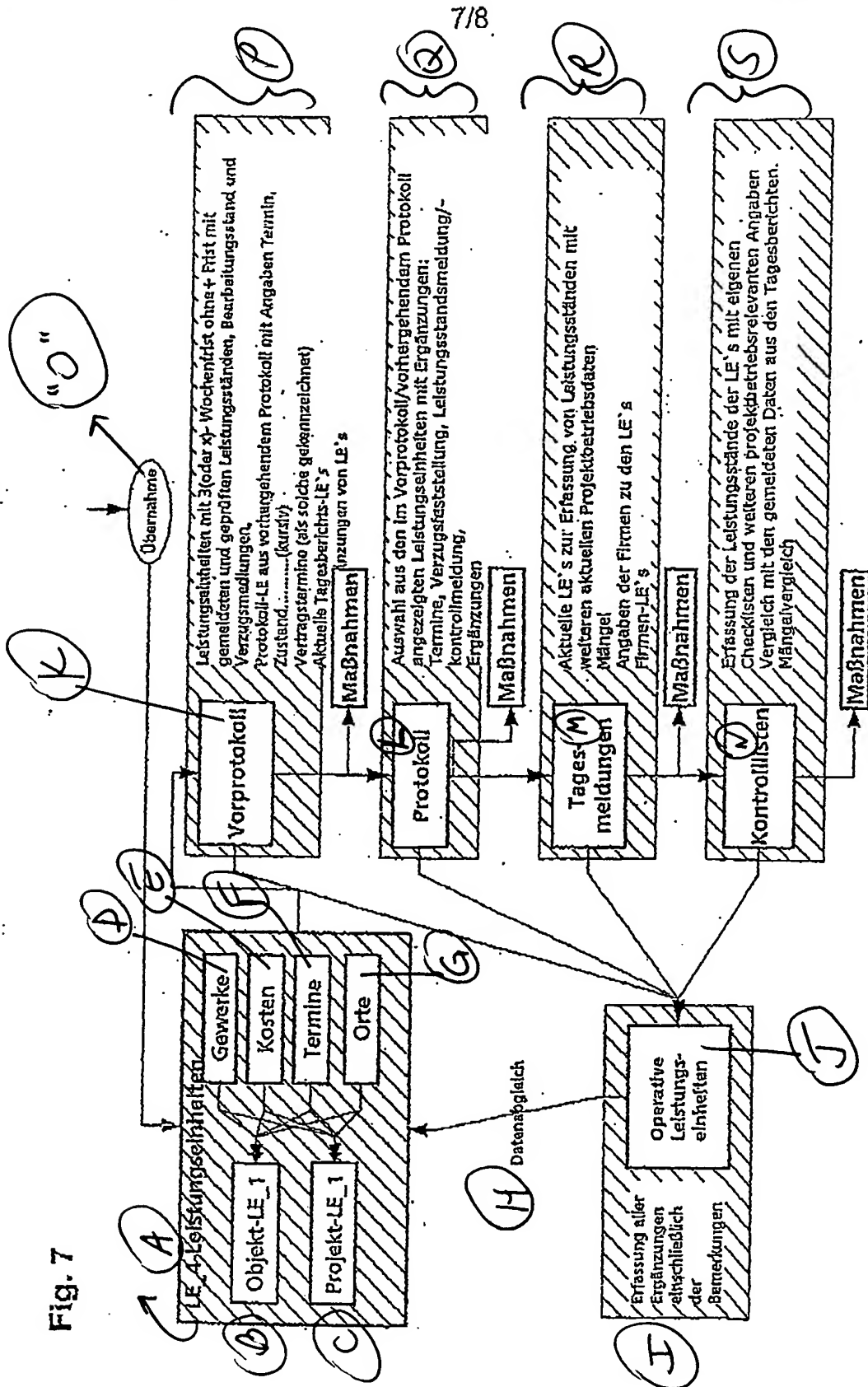
[Keys to Fig. 7]

- A LE 4 performance units
- B object LE 1
- C project LE 1
- D works
- E costs
- F deadlines
- G places
- H data equalization
- I detection of all supplementations including remarks
- J operational performance units
- K pre-protocol:
- P performance units with three (or x) week time limit
  - without extension, with reported and checked
  - performance status, processing status and delay reports
  - protocol LE from preceding protocol with deadline data
  - condition: (italics)
  - contractual deadlines (identified as such)
  - current daily report LEs
  - supplements to LEs
- L protocol
- Q selection from performance units with addition
  - as indicated in pre-protocol - preceding protocol
  - with additions: deadlines, delays, performance
  - status reports/control report, additions
  - measures
- M daily reports:
- R current LEs to detect performance status with other current
  - project operation data
  - defects
  - company data on LEs
  - company LEs
  - measures
- N control lists:
- S detection of performance status of LEs having own check
  - lists and other project-operation-relevant data
  - comparison with reported data in daily reports
  - comparison of defects
  - measures

WO 2004/015599

PCT/DE2003/002531

Fig. 7



[Keys to Fig. 8]

- A LE 0 performance units 0
- B performance units LE 9  
These data represent the original data from the determination of measurements of building/AA/BNK/planning etc. and are prepared manually and/or with CAD support  
Depending on planning level, these are carried in increasingly detailed form. The data collection and structure corresponds to the past form of data detection and processing, used in the various methods employed. In future, they will be stored in this form, permitting access or coordination with the LE structures.
- C LE 1 performance units 1 on the cost estimating level  
performance units LE 1:
- D performance descriptions at time of cost estimating  
key data: building type, size NF/FF, cubic content etc. for cost estimating, possibly in connection with calculation of factors  
performance units contain all project-relevant operations to date, insofar as required
- E LE 2 performance units 2 on the cost-calculating level
- F performance units LE 2  
performance descriptions at time of cost calculation, detailed trades organization, budget planning etc.  
The performance units contain all project-relevant operations to date, insofar as required. The performance units are associated with each other and so can be grouped and/or detailed
- G LE 3 performance units 3  
on the level of allocation/contracts
- H performance units LE 3  
performance descriptions at time of allocation and contracts with detailed trades organization, contract costs etc.  
The performance units contain all project-relevant operations to date insofar as required. The performance units are associated with each other and so can be grouped and/or detailed
- I LE 4 performance units 4  
on the level of project/object production
- J performance units LE 4  
performance descriptions of project. They reproduce all project-relevant transactions. They can be grouped, detailed and represented by location, cost, trades and deadlines.

WO 2004/015599

PCT/DE2003/002531

8/8

Fig. 8

(31)

